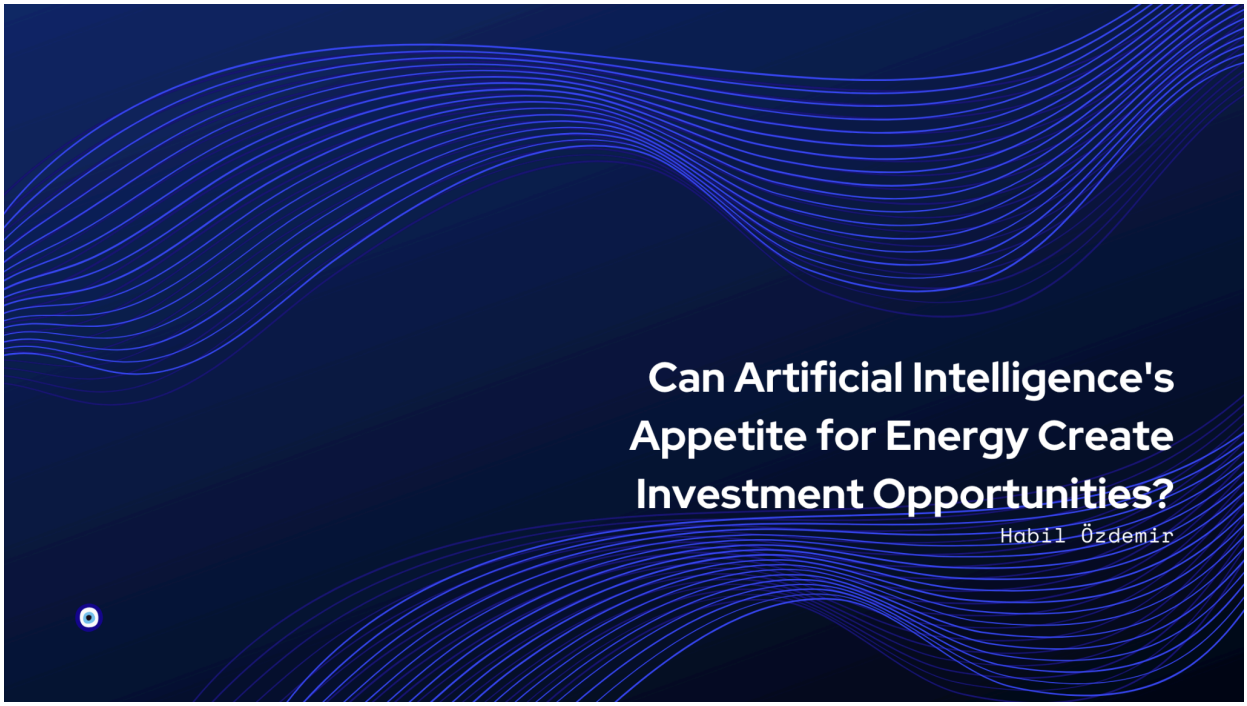

Artificial intelligence is creating a huge demand for energy. To meet this demand, we need uninterrupted power. Renewable energies like solar are limited. Nuclear power plants can be used as a solution, and this could create a potential investment opportunity.

Let's examine this in detail.

Artificial intelligence has a massive demand for energy. Let's start by listing the reasons behind this demand:

Training

Training large language models is a very intensive process.

Inference

After a model is trained, it consumes energy for every question it answers.

Data Centers

7/24 energy is needed to cool the servers.

Base Load

Data centers should not be shut down even for a second. The power that meets this continuous (minimum) demand is called "base load".

What Are the Limitations?

Solar panels do not work at night, and wind turbines stop when the wind is not blowing. We also cannot store energy on a scale large enough to meet the base load of a giant data center.

Solution?

Nuclear energy is of critical importance. Let's examine it under the following headings:

7/24 Reliability

Apart from planned maintenance, they can operate continuously at nearly 90-95% capacity.

Low Carbon Emissions

It is a favorite of technology companies and governments because it produces almost no carbon emissions during operation.

High Energy

A huge amount of energy can be produced in a very small area.

What Are the Investment Opportunities?

Uranium

The fuel for nuclear reactors is uranium. The shares of companies engaged in uranium mining could be positively affected. Uranium ETFs can be examined.

SMRs (Small Modular Reactors)

The construction of traditional nuclear power plants is very time-consuming and costly. SMRs can be manufactured in a factory and transported to the site. There could be great potential if large technology companies build them for their own data centers.

Construction and Engineering Companies

New power plants or efforts to extend the life of existing plants could mean major contracts for giant engineering companies in this field.

Other Companies

Companies that produce reactor parts, provide maintenance services, and work on nuclear waste management can also join this trend.